

this nature are well understood in the industry and will cause little problem. The thrust bearing, between the two elements, see location 32 on Figure 1, must be expected to show wear and is designed so that it can be replaced at reasonable service intervals without recourse to sophisticated service facilities. Basically the thrust bearing surface is a sacrificial bearing and plans should be made to replace this bearing with each change of bit. (At least the bearing should be examined each time the tool comes to the surface.) Means can also be provided to measure the bearing wear at the surface without loss of time. - -

The required changes to claims 27, 28 and 30 are not necessary as these claims will be cancelled.

In the drawings:

Please accept substitute Figures 2 and 3 for approval. The element originally labeled "11A" has been changed to - - 11B - -, as required by the Examiner.

Please also accept substitute Figure 1 for approval. The thrust bearing (originally item 28 in original Figure 9) has been referenced as item 32. (Item 28 has already been used as the magnet in the specification.) The addition of this reference number adds no new material as support may be found in original Figure 9 and in the original specification (page 17, lines 9).

The remaining drawings (submitted for approval in the response to the First Office Action) require no further amendment as the directional controller utilizing a single sleeve has been cancelled from the claims.